

## Low on the Hog

### The Quality of Life near Swine Farms

North Carolina's swine industry is among the largest in the nation, second only to that of Iowa. By far, most of the hogs produced in North Carolina are raised in large industrial facilities with thousands of animals each. These operations have prompted concerns about noxious odors and potentially hazardous air emissions. Steve Wing, an associate professor of epidemiology in the School of Public Health at the University of North Carolina at Chapel Hill, and Suzanne Wolf, a research associate in epidemiology at the same university, evaluated adverse health effects and reduced quality of life among residents living close to intensive livestock operations in rural North Carolina [*EHP* 108:233–238].

Performed in February 1999 at the request of the North Carolina Department of Health and Human Services, the study evaluated 155

people from three communities: one in the vicinity of a livestock operation with approximately 6,000 hogs, another in the vicinity of two intensive cattle operations, and a control community situated at least two miles from any animal operation with a liquid waste management system such as a lagoon (cesspool). The inclusion of a cattle-neighboring community allowed for a comparison of health effects related to different kinds of livestock facilities.

Participants in the study were given a questionnaire asking them to estimate the number of times they had experienced respiratory, gastrointestinal, skin, eye, or other miscellaneous symptoms during the previous six months. In addition, questions thought to be medically unrelated to livestock emissions were included to control for tendencies to report excesses of all symptoms because of negative feelings about livestock operations. Quality of life was evaluated by asking participants how many times they were unable to go outside or open windows on pleasant days. To prevent bias in the results, none of the questions referred specifically to livestock operations or odors;

furthermore, participants were told the questionnaire was part of a rural health survey rather than a livestock and health survey.

Wing and Wolf found that symptoms including headache, runny nose, sore throat, excessive coughing, diarrhea, and burning eyes were reported more frequently by residents of the hog-neighboring community compared to residents of the other two communities. (These symptoms also appeared in previous studies of livestock workers.) By far, the greatest differences among the communities were found in their quality of life. Over half of the respondents living near the hog operation reported being unable to go outside or open windows on pleasant days, compared to only one-fifth of respondents in the other two communities. Furthermore, in answering a series of open-ended questions about the general quality of their environment, people living near the hog operation described hog odors as a significant issue.

—Charles W. Schmidt

## Not Very Neighborly

### The Injustice of Hog Farm Siting

During the last 15 years, North Carolina's swine industry has become dominated by corporate mega-producers that handle all aspects of production, from raising the hogs to marketing and distribution. Much of the production is concentrated in eastern North Carolina, a relatively poor region of the state with a large rural African-American population. This has led to mounting concerns that the environmental health impacts of hog production are being borne disproportionately by the poor and by people of color, a situation known as environmental injustice.



**Not in my backyard.** Two new studies look at the effects on people's health of living near a hog farm.